



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/524,027

02/09/2005

Takashi Kakiuchi

2005_0063A

4882

52349

7590

03/14/2008

WENDEROTH, LIND & PONACK L.L.P.

2033 K. STREET, NW

SUITE 800

WASHINGTON, DC 20006

EXAMINER

WEINSTEIN, LEONARD J

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

03/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,027	Applicant(s) KAKIUCHI ET AL.	
	Examiner LEONARD J. WEINSTEIN	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 24, 2008 has been entered.
2. The examiner acknowledges the amendments made to claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2, 4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dreiman et al. US 6,135,727 in view of Fischer US 6,012,423. Dreiman teaches all the limitations as claimed for a hermetic compressor including: **[claim 1]** an electric driving element, elements 34 and 38, a compressing element 50 driven by the electric driving element, elements 34 and 38, and a closed vessel, as defined by elements 22 and 24, for housing the electric driving

Art Unit: 3746

element, elements 34 and 38, and the compressing element 50, wherein the compressing element 50 comprises, a shaft 42 having an eccentric shaft portion 82, a spindle portion 92 provided at a bottom surface of the eccentric shaft portion 82 and an auxiliary shaft portion 96 provided at a top surface of the eccentric shaft portion 82 so as to be coaxial with the spindle portion 92, a cylinder block, defined by elements 44 and 76, provided with a compression chamber 66, a main bearing 68 provided on the cylinder block, defined by elements 44 and 76, so as to support the spindle portion 92, an auxiliary bearing 70 provided on the cylinder block, element 76 of elements 44 and 76, so as to support the auxiliary shaft portion 96, a piston 56 reciprocating in the compression chamber 66, and a connecting member 53 for connecting the piston 56 and the eccentric shaft portion 82, wherein a first balance weight 106 is provided on the auxiliary shaft portion 96 at a top end of the eccentric shaft portion 82, wherein a second balance weight 92a is provided on the spindle portion 92 at a bottom end of the eccentric shaft portion 82, and wherein the first balance weight 106 is coupled to the auxiliary shaft portion 96 by a separate member 142; **[claim 2]** a separate member 142 is a screw, as shown in figure 4, and wherein the auxiliary shaft portion 96 and the first balance weight 106 are coupled to each other by the screw 142 so as to be fixed, as elements 110 and 114 are operatively fixed to element 96 by element 142; **[claim 4]** an auxiliary shaft portion 96 and the first balance weight 106 are provided with a concave part, element 128 of element 110, and a convex part, element 146 of element 114, respectively, such that the concave part, element 128 of element 110, and the convex part, element 146 of element 114, fit together, as shown in figure 3B, so as to position the first balance weight 106; **[claim 7]** and a main bearing 60 is coupled with the cylinder block, element 44 and 76, by a fastening member, bolt element as shown in figure 1 disposed below element 92a. Dreiman fails to teach the following limitation that is

Art Unit: 3746

taught by Fischer for a crank including a balance weight 24 coupled to an auxiliary shaft 17 by a separate member 26 wherein the separate member 26 is arranged between a balance weight 24 and an auxiliary shaft 17 so that the separate member is in contact with both the weight 24 and the shaft. The structure of the Fischer is similar to Dreiman because the shaft portion 17 identified as an auxiliary shaft is formed integrally with a main shaft 16. The balance weight of Dreiman is divided into elements 108 and 110, where element 108 forms a general platform that extends from a shaft 96 when inserted in to the slots formed by surfaces designated as 98, 100, 102, and 104. The actual counter weight 110 rests upon the platform formed by element 108 and is faceted by screws 142. The arrangement of shaft 96 and 108 before the weight 110 is introduced is analogous to the arrangement defined by elements 17 and 16 of Fischer except the elements of Dreiman are not monolithic. A modification to Dreiman that would anticipate the limitations as claimed would require that elements 108 and 96 be formed in as a single element as shown in Fischer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine an auxiliary shaft with a platform forming structure for supporting and a balance weight and connecting to the shaft, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dreiman et al. 6,135,727 in view of Fischer US 6,012,423, as applied to claim 1 above. Dreiman teaches all the limitations as discussed but fails to teach the limitation of a rivet being a separate member for coupling a first balance weight to an auxiliary shaft portion. With regards to the limitation of a rivet for coupling elements of the compressor as discussed, the examiner takes official notice.

Art Unit: 3746

The limitation of a rivet connecting two elements capable of being connected in the alternative by the use of screws, is well-known means of fastening components together and is considered to be common knowledge in the art, and further is capable of instant and unquestionable demonstration as being well-known.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dreiman et al. 6,135,727 in view of Fischer US 6,012,423, as applied to claim 1 above. Dreiman teaches all the limitations as discussed including an auxiliary shaft portion 96, a sliding portion 80 within an auxiliary bearing 70, and a hole 138 through which a screw passes 142 and discloses the general conditions of the claimed invention except for the express disclosure of a distance of no less than 1/2 of a diameter of a hole between a top end of the sliding portion and a top end of an auxiliary shaft portion, and a distance of no less than 1/2 of a diameter of a hole between a bottom end of the sliding portion and a bottom end of the auxiliary shaft portion. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a top and bottom end of a sliding portion at a predetermined distance from a top and bottom end of an auxiliary shaft portion, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dreiman et al. 6,135,727 in view of Fischer US 6,012,423, as applied to claim 3 above. As discussed Dreiman teaches all the limitations including an auxiliary shaft portion 96, a sliding portion 80 within an auxiliary bearing 70, and a hole 138 through which a fastener means passes 142 and discloses the general conditions of the claimed invention except for the express disclosure of a distance

Art Unit: 3746

of no less than 1/2 of a diameter of a hole between a top end of the sliding portion and a top end of a auxiliary shaft portion, and a distance of no less than 1/2 of a diameter of a hole between a bottom end of the sliding portion and a bottom end of the auxiliary shaft portion. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a top and bottom end of a sliding portion at a predetermined distance from a top and bottom end of an auxiliary shaft portion, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD J. WEINSTEIN whose telephone number is (571)272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Karmer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles G Freay/
Primary Examiner, Art Unit 3746

/Leonard J Weinstein/
Examiner, Art Unit 3746